WHAT IS CLAIMED IS:

1. A semiconductor device, comprising a semiconductor substrate of a first conductivity type, in which an extended drain region of a second conductivity type and a source region of the second conductivity type are formed with an interval therebetween, wherein:

the extended drain region includes a plurality of buried layers, each formed by burying an impurity layer of the first conductivity type, the plurality of buried layers extending substantially parallel to a substrate surface and with an interval therebetween in a depth direction; and

a concentration of an impurity of the second conductivity type in the extended drain region at a depth of about 6 μm from the substrate surface is about $1x10^{15}/cm^3$ or more and is about 30% or more of that at a depth of about 2 μm from the substrate surface.

2. The semiconductor device of claim 1, wherein the buried layers are electrically connected to the semiconductor substrate.

3. A semiconductor device, comprising a semiconductor substrate of a first conductivity type, in which an extended drain region of a second conductivity type and a source region of the second conductivity type are formed with an interval therebetween, wherein:

the extended drain region includes a buried layer, formed by burying an impurity layer of the first conductivity type, the buried layer extending substantially parallel to a substrate surface; and

a concentration of an impurity of the second conductivity type in the extended drain region, excluding the buried layer, at a depth of about 6 μm from the substrate surface is about $1x10^{15}/cm^3$ or more and is about 30% or more of that at a depth of about 2 μm from the substrate surface.

4. The semiconductor device of claim 3, wherein the buried layer is electrically

connected to the semiconductor substrate.

5. A method for manufacturing a semiconductor device, comprising:

a first step of selectively implanting a semiconductor substrate of a first conductivity type with impurity ion of a second conductivity type with an implantation energy that is equal to or greater than about 1.0 MeV and less than or equal to about 3.0 MeV so as to form an extended drain region of the second conductivity type in an upper portion of the semiconductor substrate; and

a second step of forming a plurality of buried layers, each being an impurity layer of the first conductivity type, in the extended drain region so that the plurality of buried layers extend substantially parallel to a substrate surface with an interval therebetween in a depth direction.

6. The method for manufacturing a semiconductor device of claim 5, wherein the first step includes a step of performing a heat treatment on the semiconductor substrate so that a diffusion depth of the extended drain region is equal to or greater than about 5 μm and less than or equal to about 15 μm.

7. The method for manufacturing a semiconductor device of claim 5, wherein in the second step, the plurality of buried layers are successively formed by an ion implantation method, starting from the buried layer at a deepest position to the buried layer at a shallowest position in the extended drain region.